



GOVERNMENT OF TAMILNADU
DEPARTMENT OF ARCHAEOLOGY
&
ROJA MUTHIAH RESEARCH LIBRARY

Jointly organizing an

International Seminar on

Early Tamil Culture and Heritage

In Commemoration of

Padmasri IRAVATHAM MAHADEVAN

ABSTRACT

March 11th & 12th 2022

Venue

2nd Floor, Book Release Hall, Anna Centenary Library,
Kotturpuram, Chennai - 600 085

The responsibility for the facts stated or opinions expressed is entirely of the author

கட்டுரைகளில் சொல்லப்பட்டுள்ள கருத்துகள் அனைத்தும் கட்டுரை ஆசிரியர்களின் கருத்துகளே,
அவற்றிற்கு அவர்களே பொறுப்பாவர்

About the Seminar...

Iravatham Mahadevan (2 October 1930 – 26 November 2018) was an Indian epigraphist and civil servant, known for his decipherment of Tamil-Brahmi (Tamili) inscriptions and for his expertise on the epigraphy of the Indus Valley Civilisation.

Mahadevan successfully passed the Indian Administrative Service examinations held in 1953 and was allotted to the Tamil Nadu cadre. Mahadevan worked as an Assistant Collector in Coimbatore district and Sub-Collector at Pollachi. In 1958, Mahadevan was transferred to Delhi as Assistant Financial Advisor in India's Ministry of Commerce and Industry serving from 1958 to 1961. In 1961, Mahadevan was posted to Madras as Deputy Secretary in Government of Tamil Nadu's Industries Department and served as Director of Handlooms and Textiles Department from 1962 to 1966. Mahadevan voluntarily retired from the civil service in 1980.

Among the contributions of ancient Tamil script as a pioneer, Padmasri Iravatham Mahadevan is considered as a proponent and pioneer in bringing out publications like "The Corpus of Tamil Brahmi Inscriptions (1966); "Early Tamil Epigraphy: From the earliest times to the sixth century AD (2003); Also the revised and enlarged second edition of the same in 2014; Aham and Puram; Address signs of the Indus script (2010)

Mahadevan turned his interest to the decipherment of the Indus script, for which he was awarded the Jawaharlal Nehru Fellowship in 1970. This resulted in the publication of The Indus Script, which has from the time of its publication in 1977 remained the most important source book on the subject. In this work, Mahadevan identified the signs on the Indus seals in terms of their frequency and positional distribution, and the distribution of the images or object-types that the signs represented. He also mapped, among other things, the geographical spread of the signs. His work is now a classic in Harappan studies.

Mahadevan resumed work on the Tamil Brahmi inscriptions in 1991 and accepted a three-year National Fellowship from the Indian Council of Historical Research in 1992, which led to the publication of Early Tamil Epigraphy. He continued work on the Indus script in later years, and established the Indus Research Centre at the Roja Muthiah Research Library in Chennai as a platform to promote research in this field. Mahadevan served as the General President of the Indian History Congress in 2001, and the Government of India awarded him the Padmasri in 2009.

In commemoration of Padmasri Iravatham Mahadevan's contribution to Tamil language, it is desired to conduct an International seminar entitled "Early Tamil Culture and Heritage" every year by Tamil Nadu State Department of Archaeology. This attempt is considered as a more suitable and relevant gesture of hailing his laudable service to the Tamil language and society.

Contents

1. MOTHER GODDESSES IN THE DRAVIDIAN LINGUISTICS LANDSCAPE

- Dr. R. Balakrishnan, I.A.S.,(Retd.)

2. RECENT ARCHAEOGENETIC RESEARCH AT THE HARAPPAN SITE OF RAKHIGARHI

Prof. Vasant Shinde

3. EARLY PORTS AND TRADE NETWORK OF THE EAST COAST

Dr. Sunil Kumar Patnaik

4. HARAPPAN ELEMENTS IN TAMIL CULTURE- AN OVERVIEW

Dr. D. Dayalan

5. PADMASRI IRAVATHAM MAHADEVAN'S CONTRIBUTION TO INDUS SCRIPT

Dr. R.S. Bisht

6. IM77 – WEB CONCORDANCE AND THE FUTURE OF INDUS CONCORDANCE

G. Sundar

7. EXCAVATIONS AT KADEBAKELE: HUNTING AND HERDING, FARMING AND FOOD IN NEOLITHIC, IRON AGE, AND EARLY HISTORIC SOUTHERN INDIA

Prof. Kathleen D. Morrison

8. IRAVATHAM MAHADEVAN'S EARLY TAMIL EPIGRAPHY AND HIS CONTRIBUTION TO THE UNDERSTANDING OF PROTO – DRAVIDIAN LINGUISTICS

Prof. Appasamy Murugaiyan

9. SOME REMINISCENCES OF PADMASRI IRAVATHAM MAHADEVAN

Dr. S. Swaminathan

10. THE FIRST EXCAVATIONS AT HARAPPA

Omar Khan

11. SPIRITUALITY vs RELIGIOSITY: THE MUCIRI PATTANAM STORY

Prof. P.J. Cherian

**12. METROLOGICAL UNITS, TAX AND LICENSE CATEGORIES, MODES OF TAX PAYMENT:
SEMANTIC SCOPES OF SIGNS THAT FREQUENTLY OCCUR IN PHRASE-FINAL AND
PRE-PHRASE-FINAL POSITIONS IN INDUS SCRIPT**

Bahata Ansumali Mukhopadhyay

**13. NEOLITHIC CULTURE AS REVEALED FROM MODUR EXCAVATIONS DHARMAPURI DISTRICT,
TAMIL NADU**

K. Sridaran

**14. REMINISCENCES ABOUT SRI. IRAVATHAM MAHADEVAN: SOME FUTURE DIRECTIONS IN
INDUS CIVILIZATION RESEARCH AND THEIR LINKS WITH IRON AGE TAMIL NADU**

Dr. N. Ganesan

**15. TAMIL-BRAHMI INSCRIPTIONS AND SETTLEMENT PATTERNS OF EARLY HISTORIC
TAMIZHAGAM**

Dr. V. Selvakumar

16. சில தமிழ்-பிராமிக் கல்வெட்டுகள் மறுபார்வை

Dr. V. Vedachalam

17. SEMBIAN KANDIYUR CELT - A RELOOK

Dr. N. Marxiagandhi

18. மகாதேவன் தமிழ்-பிராமி கல்வெட்டு வாசிப்புகளில் சில மாற்றங்கள்

Dr.R. Poongundran

19. IVC'S VENUS OCTANNIAL FESTIVAL TABLET

Sukumar Rajagopal

**20. AUTHOR, ORIGIN AND CHRONOLOGY OF TAMILI SCRIPT- ITS STAGES OF
DEVELOPMENT – RECENT FINDINGS**

Dr. S.Rajavelu

21.சங்ககாலத் தமிழ்-பிராமி மேதிரங்கள்,முத்திரைகள்,காசுகள்

Arumuga Seetharaman

22. REMINISCENCES OF PADMASRI IRAVATHAM MAHADEVAN

T. S. Subramanian

DR. R. BALAKRISHNAN, I.A.S.,(retd.)

*Honourary Consultant
Indus Research Centre
Raja Muthiah Research Library, Chennai*

PROF. VASANT SHINDE

*Former Vice-Chancellor
Deccan College, (Deemed to be University)*

DR. SUNIL KUMAR PATNAIK

*Former Deputy.Director
Odishan Institute of Maritime & South East Asian Studies (OIMSEAS)
Bhubaneswar, Odisha*

DR. D. DAYALAN

*Archaeological Consultant
Tamil Nadu State Department of Archaeology*

DR. R.S. BISHT

*Former Joint Director General
Archaeological Survey of India*

THIRU. G. SUNDAR

Director, Raja Muthiah Research Library

PROF. KATHLEEN D. MORRISON

*Professor, Department of Anthropology
University of Pennsylvania, USA*

PROF. APPASAMY MURUGAIYAN

*Associate Professor
Iranian and Indian Worlds Research Unit
National Centre for Scientific Researchers, Paris*

DR. S. SWAMINATHAN

Former Deputy Superintending Epigraphist, ASI

THIRU. OMAR KHAN
Independent Researcher

PROF. P.J. CHERIAN
*Former Director
Kerala Council of Historical Research*

MS. BAHATA ANSUMALI MUKHOPADHYAY
Independent Researcher, Bangalore

THIRU. K. SRIDARAN
*Former Deputy Superintending Archaeologist
Tamil Nadu State Department of Archaeology*

DR. N. GANESAN
*Independent Researcher, NASA
Houston, Texas, USA*

DR.V. SELVAKUMAR
*Department of Maritime History and Marine Archaeology
Tamil University, Thanjavur*

DR. V. VEDACHALAM
*Former Senior Epigraphist
Tamil Nadu State Department of Archaeology*

DR. N. MARXIAGANDHI
*Former Deputy Superintendent Archaeologist
Tamil Nadu State Department of Archaeology*

DR. R. POONGUNDRAN
*Former Assistant Director
TamilNadu State Department of Archaeology*

SUKUMAR RAJAGOPAL
Independent Researcher

DR. S.RAJAVELU
*Adjunct Faculty Department of History
Alagappa University
Karaikkudi*

ARUMUGA SEETHARAMAN
Independent Researcher

T. S. SUBRAMANIAN
Independent Researcher

MOTHER GODDESSES IN THE DRAVIDIAN LINGUISTICS LANDSCAPE



Dr. R. Balakrishnan, I.A.S.,(Retd.)

Honourary Consultant
Indus Research Centre
Roja Muthiah Research Library
Chennai

The ancient extant divine entity of South Asia traceable archaeologically was Female. The earliest segments of Vedic traditions are dominated by male deities. However, in the subsequent Indian mythologies powerful goddesses become very common. How to reconcile this? If Mother Goddess or some sort of female divinities formed the central core of Indus Valley Civilization's faith system how to track its continuity in the cultures within the Indian subcontinent? This presentation seeks to find some answers to these questions by exploring the Dravidian linguistic landscape, Old Tamil texts and certain Dravidian Tribes of Odisha and other places.

RECENT ARCHAEOGENETIC RESEARCH AT THE HARAPPAN SITE OF RAKHIGARHI



Prof. Vasant Shinde

Former Vice – Chancellor
Deccan College (Deemed to be University), Pune

Recent archaeological and genetic research at the largest Harappan City of Rakhigarhi in Haryana by an international team has settled the issue of the authors of Indian Culture. The roots of Indian culture and genes go back to the Harappan Culture that flourished in the Indian subcontinent from the middle of sixth to the middle of the second millennium BCE. The DNA research at Rakhigarhi indicates that the Harappans were indigenous people who have authored most of the cultural developments including urbanization in this part of the world. Continuity in genetic history, material culture and human complexion from the Harappan times to the present negates the so-called Aryan invasion or migration theory. Due to trade and movement of the people mixing of genes of different people happened right from the beginning of the settled life. Scientific archaeological, genetic and craniofacial data in this respect from various Harappan sites will be highlighted with the help of visuals in this lecture.

EARLY PORTS AND TRADE NETWORK OF THE EAST COAST



Dr. Sunil Kumar Patnaik

Sr. Archaeologist and
Member Secretary
Odishan Institute of Maritime &
South East Asian Studies
Odisha, Bhubaneswar

The Archaeological explorations and excavations along the East Coast of India, precisely from Tamruk (Tamralipti) to Nagapattinam and Korkai have unearthed number of early historical port sites which are explored and some them excavated. These sites are well of represented in entire East Coast stretching from Bengal to Tamilnadu which shared the common maritime history and heritage of the states of West Bengal, Odisha, Andhra Pradesh and Tamil Nadu. The excavated materials such as rouletted ware, NBP, knobbed ware, coins, beads, and semi-precious stones together with monumental remains such as Stupas, Chaityas, Monasteries, Temples and inscriptions have shed new light on the trade mechanism of the East Coast on the Bay of Bengal. In fact, the East Coast was played a major role throughout history to connect people and culture of South East Asia and Roman world. Ancient Odisha or Kalinga played a major role in the maritime trade activities in Indian Ocean region beginning from the 3rd century BCE to the rise of Cholas in the early 11th century CE. This paper delineates the trade phenomenon of the early period with special references to recent explored sites of Palura, Kalingapatna, Visakahaptana etc. The early trade network of the East Coast which are revolved around the historic towns, is one of the major areas of study to understand the cultural heritage of the Coromandel Coast. The paper is more concentrated on the recent explored site of Palur port site in the Odishan coast which is well refereed in the historical literature and one of the major ports linking entire East Coast during the early historical period.

HARAPPAN ELEMENTS IN TAMIL CULTURE- AN OVERVIEW



Dr. D. Dayalan

Archaeological Consultant
Tamil Nadu State Department of Archaeology

The Harappan civilization, which flourished during the third millennium BCE in the Indus and adjoining river valleys, had an extensive trade and cultural contacts with the contemporary civilizations in the Indian subcontinent and beyond. The excavations of the Harappan Civilization at various sites reveals the excellent talent of the Harappan people in developing the art and architecture of par excellence. There was an extensive maritime trade network between the Harappan and Mesopotamian civilizations as early as the 3rd millennium BCE. The seals and sealings, weights, beads, ivory items, pottery and a few others of Harappan make or bearing obvious Harappan influence are found distributed in Mesopotamia, Oman (Magan), United Arab Emirates, Bahrain (Dilmun), Failaka Island, Iran and Central Asia. The Harappans had also maintained an extensive interaction with the contemporary Neolithic and Chalcolithic cultures in the other parts of India. The Neolithic culture, the early farming community in India, has been established in five different geographical regions. The prevalence of the Neolithic culture in south India, which is almost contemporary to the Harappan culture, is well attested by the discovery of a large number of sites of this culture in this region. The traces of exchange of materials and cultural interaction between these two cultures indicate that the Neolithic people of Tamil Nadu had either direct or indirect contact with the Harappan people. There is a resemblance of the graffiti marks, pottery making-techniques and shapes, living patterns, burial practices, tools and the art objects found in the Neolithic and the

Megalithic cultures of Tamil Nadu with the Harappan ones. Such similarities in these cultures are not mere coincidence, but they are the result of the infiltration of human thought and imagination from one culture to the other. The paper deals in detail the possible trade and cultural contact of Harappans with the contemporary people in South India in general and Tamil Nadu in particular. The paper also discusses the probable residues of the Harappan cultural features in the Iron Age/megalithic culture of south India in general and Tamil Nadu in particular.

IM77 – WEB CONCORDANCE AND THE FUTURE OF INDUS CONCORDANCE



G. Sundar

Director
Roja Muthiah Research Library

Iravatham Mahadevan published the Indus Concordance in 1977 for ASI. This entire work was done at the TIFR, Mumbai. This is the only published Concordance available. Hence Indus researchers have been wanting to access the database. In collaboration with the Tamil Nadu State Department of Archaeology, RMRL has made the dataset available for search purposes on an online platform through <indusscript.in>. This is now called the IM77 Web Concordance. However, this is not complete according to Iravatham Mahadevan. He wanted us to work on the new updated concordance which will encompass data for all the inscribed objects excavated so far. This has been published in four volumes by Asko Parpola. This is only a pictorial representation. Hence we need to identify signs and allocate numbers and develop this as a new data set that will form the basis for the new concordance. This presentation will deal with all these aspects.

EXCAVATIONS AT KADEBAKELE: HUNTING AND HERDING, FARMING AND FOOD IN NEOLITHIC, IRON AGE, AND EARLY HISTORIC SOUTHERN INDIA



Prof. Kathleen D. Morrison

Sally and Alvin V. Shoemaker Professor, Anthropology
Chair, Department of Anthropology
Curator in Charge, Asian Section
University Museum of Archaeology & Anthropology
University of Pennsylvania, USA

The site of Kadabakele lies on the north bank of the Tungabhadra River in what is now Koppal District, Karnataka. Excavated in collaboration with the Karnataka Department of Archaeology, Museums, and Heritage between 2005 and 2010, Kadabakele was a village or small town from the southern Neolithic through to the 16th century; after that, it continued to be used for farming and grazing. We report on the evidence of plant and animal use from the southern Neolithic, Iron Age, and Early Historic periods, bringing together the analysis of animal bones, plant remains, and artifact and feature analysis shed light on changing patterns of hunting and herding as well as farming and food.

IRAVATHAM MAHADEVAN'S EARLY TAMIL EPIGRAPHY AND HIS CONTRIBUTION TO THE UNDERSTANDING OF PROTO – DRAVIDIAN LINGUISTICS



Prof. Appasamy Murugaiyan

Associate Professor
Iranian and Indian Worlds Research Unit
National Centre for Scientific Researchers
Paris

This paper is an attempt to acknowledge with gratitude the contribution of **Iravatham Mahadevan's Early Tamil Epigraphy** to the better understanding of Dravidian and Tamil historical syntax, language change and typological changes. Iravatham Mahadevan in his **Early Tamil Epigraphy** has provided us with valuable first-hand data and analysis enabling the researchers to explore further the earliest linguistic dimensions of Proto-Dravidian as well of the ancient Tamil. I will use data from Tamil-Brāhmī or Tamiḻi inscriptions (3rd BCE - 6th CE), few later Tamil inscriptions. I propose to examine, in light of the epigraphic data, a few of the important issues in the Dravidian and Tamil historical syntax: the major structural changes and the typological shift from analytic to an agglutinative pattern, the major syntactic structures used at the phrasal, clausal and sentential levels, the variations in the word order typology and other salient features of the earliest Tamil inscriptions.

SOME REMINISCENCES OF PADMASRI IRAVATHAM MAHADEVAN



Dr. S. Swaminathan

Former Deputy Superintending Epigraphist
Archaeological Survey of India

My association with Iravatham Mahadevan Sir goes back to 1995 when he visited Mysore to collect materials for his work *Early Tamil Epigraphy*. Daily I used to interact with him and was amazed at his scholarship and his other qualities of head and heart. In fact, it was Iravatam Sir, who initiated me into the mysteries of Tamil Brahmi inscriptions and he used Tamil-Brahmi inscriptions along with their meaning. He was a tireless worker. He often emphasised to learn Sanskrit and linguistics for they are *sin quo non* for any Epigraphist. I accompanied him on three tours viz Edakkal, and Elutttukal in Kerala and Tamattukallu in Karnataka. I saw his energy and enthusiasm *in situ*. He was a perfectionist and left nothing for granted. He used to reminisce about his earlier days. I learnt a lot from him

THE FIRST EXCAVATIONS AT HARAPPA



Omar Khan

Independent Researcher

The history of puzzles leading up to the first excavations by Daya Ram Sahni in January 1921 are discussed with slides recently launched on Harappa.com as part of a 1,000 slide series on Harappa 1921-1934. Long unseen images and texts by archaeologists, especially the two primary Indian excavators of the site, Sahni and Madho Sarup Vats, will be shown in this reflection on archaeological and photographic history.

SPRITUALITY vs RELIGIOSITY : THE MUCIRI PATTANAM STORY



Prof. P.J. Cherian

Former Director
Kerala Council of Historical Research

This paper explores the single piece of evidence: a five letter Tamil Brahmi graffito on a rim of a huge terracotta pot which Dr. Iravatham Mahadevan helped to decipher. He read the inscription as “Amanar” meaning a sage belonging to Jain or Buddhist traditions. The style of the letters allow the script to be dated to the 2nd century CE .

The paper further attempts to explore the spirituality and religiosity of the Sangam Age based on the material evidence so far unearthed at Pattanam. The effort is to tentatively suggest a new framework that does not rely on the meanings of spirituality and religiosity of the Semitic and caste societies.












METROLOGICAL UNITS, TAX AND LICENSE CATEGORIES, MODES OF TAX PAYMENT: SEMANTIC SCOPES OF SIGNS THAT FREQUENTLY OCCUR IN PHRASE-FINAL AND PRE-PHRASE-FINAL POSITIONS IN INDUS SCRIPT



Bahata Ansumali Mukhopadhyay

Independent Researcher

Indus Script is one of the most enigmatic aspects of Indus valley civilization. In previous papers, the author has established the semasiographic/logographic nature of Indus inscriptions, and has argued that the inscribed seals and tablets were used for taxation, licensing, craft and trade control, access control, etc. These papers also discussed how different segments of Indus inscriptions encoded different types of information, such as tax categories, taxed commodities, licensed craft-making activities, tax-rates, types of tax-receiving entities, etc. Building on these findings, the present article focuses on certain phrase-final (𑀲, 𑀳, 𑀴, 𑀵, 𑀶, 𑀷, 𑀸, 𑀹, 𑀺, 𑀻, 𑀼, 𑀽, 𑀾, 𑀿, 𑁀, 𑁁, 𑁂, 𑁃, 𑁄, 𑁅, 𑁆, 𑁇, 𑁈, 𑁉, 𑁊, 𑁋, 𑁌, 𑁍, 𑁎, 𑁏, 𑁐, 𑁑, 𑁒, 𑁓, 𑁔, 𑁕, 𑁖, 𑁗, 𑁘, 𑁙, 𑁚, 𑁛, 𑁜, 𑁝, 𑁞, 𑁟, 𑁠, 𑁡, 𑁢, 𑁣, 𑁤, 𑁥, 𑁦, 𑁧, 𑁨, 𑁩, 𑁪, 𑁫, 𑁬, 𑁭, 𑁮, 𑁯, 𑁰, 𑁱, 𑁲, 𑁳, 𑁴, 𑁵, 𑁶, 𑁷, 𑁸, 𑁹, 𑁺, 𑁻, 𑁼, 𑁽, 𑁾, 𑁿, 𑂀, 𑂁, 𑂂, 𑂃, 𑂄, 𑂅, 𑂆, 𑂇, 𑂈, 𑂉, 𑂊, 𑂋, 𑂌, 𑂍, 𑂎, 𑂏, 𑂐, 𑂑, 𑂒, 𑂓, 𑂔, 𑂕, 𑂖, 𑂗, 𑂘, 𑂙, 𑂚, 𑂛, 𑂜, 𑂝, 𑂞, 𑂟, 𑂠, 𑂡, 𑂢, 𑂣, 𑂤, 𑂥, 𑂦, 𑂧, 𑂨, 𑂩, 𑂪, 𑂫, 𑂬, 𑂭, 𑂮, 𑂯, 𑂰, 𑂱, 𑂲, 𑂳, 𑂴, 𑂵, 𑂶, 𑂷, 𑂸, 𑂹, 𑂺, 𑂻, 𑂼, 𑂽, 𑂾, 𑂿, 𑃀, 𑃁, 𑃂, 𑃃, 𑃄, 𑃅, 𑃆, 𑃇, 𑃈, 𑃉, 𑃊, 𑃋, 𑃌, 𑃍, 𑃎, 𑃏, 𑃐, 𑃑, 𑃒, 𑃓, 𑃔, 𑃕, 𑃖, 𑃗, 𑃘, 𑃙, 𑃚, 𑃛, 𑃜, 𑃝, 𑃞, 𑃟, 𑃠, 𑃡, 𑃢, 𑃣, 𑃤, 𑃥, 𑃦, 𑃧, 𑃨, 𑃩, 𑃪, 𑃫, 𑃬, 𑃭, 𑃮, 𑃯, 𑃰, 𑃱, 𑃲, 𑃳, 𑃴, 𑃵, 𑃶, 𑃷, 𑃸, 𑃹, 𑃺, 𑃻, 𑃼, 𑃽, 𑃾, 𑃿, 𑄀, 𑄁, 𑄂, 𑄃, 𑄄, 𑄅, 𑄆, 𑄇, 𑄈, 𑄉, 𑄊, 𑄋, 𑄌, 𑄍, 𑄎, 𑄏, 𑄐, 𑄑, 𑄒, 𑄓, 𑄔, 𑄕, 𑄖, 𑄗, 𑄘, 𑄙, 𑄚, 𑄛, 𑄜, 𑄝, 𑄞, 𑄟, 𑄠, 𑄡, 𑄢, 𑄣, 𑄤, 𑄥, 𑄦, 𑄧, 𑄨, 𑄩, 𑄪, 𑄫, 𑄬, 𑄭, 𑄮, 𑄯, 𑄰, 𑄱, 𑄲, 𑄳, 𑄴, 𑄵, 𑄶, 𑄷, 𑄸, 𑄹, 𑄺, 𑄻, 𑄼, 𑄽, 𑄾, 𑄿, 𑅀, 𑅁, 𑅂, 𑅃, 𑅄, 𑅅, 𑅆, 𑅇, 𑅈, 𑅉, 𑅊, 𑅋, 𑅌, 𑅍, 𑅎, 𑅏, 𑅐, 𑅑, 𑅒, 𑅓, 𑅔, 𑅕, 𑅖, 𑅗, 𑅘, 𑅙, 𑅚, 𑅛, 𑅜, 𑅝, 𑅞, 𑅟, 𑅠, 𑅡, 𑅢, 𑅣, 𑅤, 𑅥, 𑅦, 𑅧, 𑅨, 𑅩, 𑅪, 𑅫, 𑅬, 𑅭, 𑅮, 𑅯, 𑅰, 𑅱, 𑅲, 𑅳, 𑅴, 𑅵, 𑅶, 𑅷, 𑅸, 𑅹, 𑅺, 𑅻, 𑅼, 𑅽, 𑅾, 𑅿, 𑆀, 𑆁, 𑆂, 𑆃, 𑆄, 𑆅, 𑆆, 𑆇, 𑆈, 𑆉, 𑆊, 𑆋, 𑆌, 𑆍, 𑆎, 𑆏, 𑆐, 𑆑, 𑆒, 𑆓, 𑆔, 𑆕, 𑆖, 𑆗, 𑆘, 𑆙, 𑆚, 𑆛, 𑆜, 𑆝, 𑆞, 𑆟, 𑆠, 𑆡, 𑆢, 𑆣, 𑆤, 𑆥, 𑆦, 𑆧, 𑆨, 𑆩, 𑆪, 𑆫, 𑆬, 𑆭, 𑆮, 𑆯, 𑆰, 𑆱, 𑆲, 𑆳, 𑆴, 𑆵, 𑆶, 𑆷, 𑆸, 𑆹, 𑆺, 𑆻, 𑆼, 𑆽, 𑆾, 𑆿, 𑇀, 𑇁, 𑇂, 𑇃, 𑇄, 𑇅, 𑇆, 𑇇, 𑇈, 𑇉, 𑇊, 𑇋, 𑇌, 𑇍, 𑇎, 𑇏, 𑇐, 𑇑, 𑇒, 𑇓, 𑇔, 𑇕, 𑇖, 𑇗, 𑇘, 𑇙, 𑇚, 𑇛, 𑇜, 𑇝, 𑇞, 𑇟, 𑇠, 𑇡, 𑇢, 𑇣, 𑇤, 𑇥, 𑇦, 𑇧, 𑇨, 𑇩, 𑇪, 𑇫, 𑇬, 𑇭, 𑇮, 𑇯, 𑇰, 𑇱, 𑇲, 𑇳, 𑇴, 𑇵, 𑇶, 𑇷, 𑇸, 𑇹, 𑇺, 𑇻, 𑇼, 𑇽, 𑇾, 𑇿, 𑈀, 𑈁, 𑈂, 𑈃, 𑈄, 𑈅, 𑈆, 𑈇, 𑈈, 𑈉, 𑈊, 𑈋, 𑈌, 𑈍, 𑈎, 𑈏, 𑈐, 𑈑, 𑈒, 𑈓, 𑈔, 𑈕, 𑈖, 𑈗, 𑈘, 𑈙, 𑈚, 𑈛, 𑈜, 𑈝, 𑈞, 𑈟, 𑈠, 𑈡, 𑈢, 𑈣, 𑈤, 𑈥, 𑈦, 𑈧, 𑈨, 𑈩, 𑈪, 𑈫, 𑈬, 𑈭, 𑈮, 𑈯, 𑈰, 𑈱, 𑈲, 𑈳, 𑈴, 𑈵, 𑈶, 𑈷, 𑈸, 𑈹, 𑈺, 𑈻, 𑈼, 𑈽, 𑈾, 𑈿, 𑉀, 𑉁, 𑉂, 𑉃, 𑉄, 𑉅, 𑉆, 𑉇, 𑉈, 𑉉, 𑉊, 𑉋, 𑉌, 𑉍, 𑉎, 𑉏, 𑉐, 𑉑, 𑉒, 𑉓, 𑉔, 𑉕, 𑉖, 𑉗, 𑉘, 𑉙, 𑉚, 𑉛, 𑉜, 𑉝, 𑉞, 𑉟, 𑉠, 𑉡, 𑉢, 𑉣, 𑉤, 𑉥, 𑉦, 𑉧, 𑉨, 𑉩, 𑉪, 𑉫, 𑉬, 𑉭, 𑉮, 𑉯, 𑉰, 𑉱, 𑉲, 𑉳, 𑉴, 𑉵, 𑉶, 𑉷, 𑉸, 𑉹, 𑉺, 𑉻, 𑉼, 𑉽, 𑉾, 𑉿, 𑊀, 𑊁, 𑊂, 𑊃, 𑊄, 𑊅, 𑊆, 𑊇, 𑊈, 𑊉, 𑊊, 𑊋, 𑊌, 𑊍, 𑊎, 𑊏, 𑊐, 𑊑, 𑊒, 𑊓, 𑊔, 𑊕, 𑊖, 𑊗, 𑊘, 𑊙, 𑊚, 𑊛, 𑊜, 𑊝, 𑊞, 𑊟, 𑊠, 𑊡, 𑊢, 𑊣, 𑊤, 𑊥, 𑊦, 𑊧, 𑊨, 𑊩, 𑊪, 𑊫, 𑊬, 𑊭, 𑊮, 𑊯, 𑊰, 𑊱, 𑊲, 𑊳, 𑊴, 𑊵, 𑊶, 𑊷, 𑊸, 𑊹, 𑊺, 𑊻, 𑊼, 𑊽, 𑊾, 𑊿, 𑋀, 𑋁, 𑋂, 𑋃, 𑋄, 𑋅, 𑋆, 𑋇, 𑋈, 𑋉, 𑋊, 𑋋, 𑋌, 𑋍, 𑋎, 𑋏, 𑋐, 𑋑, 𑋒, 𑋓, 𑋔, 𑋕, 𑋖, 𑋗, 𑋘, 𑋙, 𑋚, 𑋛, 𑋜, 𑋝, 𑋞, 𑋟, 𑋠, 𑋡, 𑋢, 𑋣, 𑋤, 𑋥, 𑋦, 𑋧, 𑋨, 𑋩, 𑋪, 𑋫, 𑋬, 𑋭, 𑋮, 𑋯, 𑋰, 𑋱, 𑋲, 𑋳, 𑋴, 𑋵, 𑋶, 𑋷, 𑋸, 𑋹, 𑋺, 𑋻, 𑋼, 𑋽, 𑋾, 𑋿, 𑌀, 𑌁, 𑌂, 𑌃, 𑌄, 𑌅, 𑌆, 𑌇, 𑌈, 𑌉, 𑌊, 𑌋, 𑌌, 𑌍, 𑌎, 𑌏, 𑌐, 𑌑, 𑌒, 𑌓, 𑌔, 𑌕, 𑌖, 𑌗, 𑌘, 𑌙, 𑌚, 𑌛, 𑌜, 𑌝, 𑌞, 𑌟, 𑌠, 𑌡, 𑌢, 𑌣, 𑌤, 𑌥, 𑌦, 𑌧, 𑌨, 𑌩, 𑌪, 𑌫, 𑌬, 𑌭, 𑌮, 𑌯, 𑌰, 𑌱, 𑌲, 𑌳, 𑌴, 𑌵, 𑌶, 𑌷, 𑌸, 𑌹, 𑌺, 𑌻, 𑌼, 𑌽, 𑌾, 𑌿, 𑍀, 𑍁, 𑍂, 𑍃, 𑍄, 𑍅, 𑍆, 𑍇, 𑍈, 𑍉, 𑍊, 𑍋, 𑍌, 𑍍, 𑍎, 𑍏, 𑍐, 𑍑, 𑍒, 𑍓, 𑍔, 𑍕, 𑍖, 𑍗, 𑍘, 𑍙, 𑍚, 𑍛, 𑍜, 𑍝, 𑍞, 𑍟, 𑍠, 𑍡, 𑍢, 𑍣, 𑍤, 𑍥, 𑍦, 𑍧, 𑍨, 𑍩, 𑍪, 𑍫, 𑍬, 𑍭, 𑍮, 𑍯, 𑍰, 𑍱, 𑍲, 𑍳, 𑍴, 𑍵, 𑍶, 𑍷, 𑍸, 𑍹, 𑍺, 𑍻, 𑍼, 𑍽, 𑍾, 𑍿, 𑎀, 𑎁, 𑎂, 𑎃, 𑎄, 𑎅, 𑎆, 𑎇, 𑎈, 𑎉, 𑎊, 𑎋, 𑎌, 𑎍, 𑎎, 𑎏, 𑎐, 𑎑, 𑎒, 𑎓, 𑎔, 𑎕, 𑎖, 𑎗, 𑎘, 𑎙, 𑎚, 𑎛, 𑎜, 𑎝, 𑎞, 𑎟, 𑎠, 𑎡, 𑎢, 𑎣, 𑎤, 𑎥, 𑎦, 𑎧, 𑎨, 𑎩, 𑎪, 𑎫, 𑎬, 𑎭, 𑎮, 𑎯, 𑎰, 𑎱, 𑎲, 𑎳, 𑎴, 𑎵, 𑎶, 𑎷, 𑎸, 𑎹, 𑎺, 𑎻, 𑎼, 𑎽, 𑎾, 𑎿, 𑏀, 𑏁, 𑏂, 𑏃, 𑏄, 𑏅, 𑏆, 𑏇, 𑏈, 𑏉, 𑏊, 𑏋, 𑏌, 𑏍, 𑏎, 𑏏, 𑏐, 𑏑, 𑏒, 𑏓, 𑏔, 𑏕, 𑏖, 𑏗, 𑏘, 𑏙, 𑏚, 𑏛, 𑏜, 𑏝, 𑏞, 𑏟, 𑏠, 𑏡, 𑏢, 𑏣, 𑏤, 𑏥, 𑏦, 𑏧, 𑏨, 𑏩, 𑏪, 𑏫, 𑏬, 𑏭, 𑏮, 𑏯, 𑏰, 𑏱, 𑏲, 𑏳, 𑏴, 𑏵, 𑏶, 𑏷, 𑏸, 𑏹, 𑏺, 𑏻, 𑏼, 𑏽, 𑏾, 𑏿, 𑐀, 𑐁, 𑐂, 𑐃, 𑐄, 𑐅, 𑐆, 𑐇, 𑐈, 𑐉, 𑐊, 𑐋, 𑐌, 𑐍, 𑐎, 𑐏, 𑐐, 𑐑, 𑐒, 𑐓, 𑐔, 𑐕, 𑐖, 𑐗, 𑐘, 𑐙, 𑐚, 𑐛, 𑐜, 𑐝, 𑐞, 𑐟, 𑐠, 𑐡, 𑐢, 𑐣, 𑐤, 𑐥, 𑐦, 𑐧, 𑐨, 𑐩, 𑐪, 𑐫, 𑐬, 𑐭, 𑐮, 𑐯, 𑐰, 𑐱, 𑐲, 𑐳, 𑐴, 𑐵, 𑐶, 𑐷, 𑐸, 𑐹, 𑐺, 𑐻, 𑐼, 𑐽, 𑐾, 𑐿, 𑑀, 𑑁, 𑑂, 𑑃, 𑑄, 𑑅, 𑑆, 𑑇, 𑑈, 𑑉, 𑑊, 𑑋, 𑑌, 𑑍, 𑑎, 𑑏, 𑑐, 𑑑, 𑑒, 𑑓, 𑑔, 𑑕, 𑑖, 𑑗, 𑑘, 𑑙, 𑑚, 𑑛, 𑑜, 𑑝, 𑑞, 𑑟, 𑑠, 𑑡, 𑑢, 𑑣, 𑑤, 𑑥, 𑑦, 𑑧, 𑑨, 𑑩, 𑑪, 𑑫, 𑑬, 𑑭, 𑑮, 𑑯, 𑑰, 𑑱, 𑑲, 𑑳, 𑑴, 𑑵, 𑑶, 𑑷, 𑑸, 𑑹, 𑑺, 𑑻, 𑑼, 𑑽, 𑑾, 𑑿, 𑒀, 𑒁, 𑒂, 𑒃, 𑒄, 𑒅, 𑒆, 𑒇, 𑒈, 𑒉, 𑒊, 𑒋, 𑒌, 𑒍, 𑒎, 𑒏, 𑒐, 𑒑, 𑒒, 𑒓, 𑒔, 𑒕, 𑒖, 𑒗, 𑒘, 𑒙, 𑒚, 𑒛, 𑒜, 𑒝, 𑒞, 𑒟, 𑒠, 𑒡, 𑒢, 𑒣, 𑒤, 𑒥, 𑒦, 𑒧, 𑒨, 𑒩, 𑒪, 𑒫, 𑒬, 𑒭, 𑒮, 𑒯, 𑒰, 𑒱, 𑒲, 𑒳, 𑒴, 𑒵, 𑒶, 𑒷, 𑒸, 𑒹, 𑒺, 𑒻, 𑒼, 𑒽, 𑒾, 𑒿, 𑓀, 𑓁, 𑓂, 𑓃, 𑓄, 𑓅, 𑓆, 𑓇, 𑓈, 𑓉, 𑓊, 𑓋, 𑓌, 𑓍, 𑓎, 𑓏, 𑓐, 𑓑, 𑓒, 𑓓, 𑓔, 𑓕, 𑓖, 𑓗, 𑓘, 𑓙, 𑓚, 𑓛, 𑓜, 𑓝, 𑓞, 𑓟, 𑓠, 𑓡, 𑓢, 𑓣, 𑓤, 𑓥, 𑓦, 𑓧, 𑓨, 𑓩, 𑓪, 𑓫, 𑓬, 𑓭, 𑓮, 𑓯, 𑓰, 𑓱, 𑓲, 𑓳, 𑓴, 𑓵, 𑓶, 𑓷, 𑓸, 𑓹, 𑓺, 𑓻, 𑓼, 𑓽, 𑓾, 𑓿, 𑔀, 𑔁, 𑔂, 𑔃, 𑔄, 𑔅, 𑔆, 𑔇, 𑔈, 𑔉, 𑔊, 𑔋, 𑔌, 𑔍, 𑔎, 𑔏, 𑔐, 𑔑, 𑔒, 𑔓, 𑔔, 𑔕, 𑔖, 𑔗, 𑔘, 𑔙, 𑔚, 𑔛, 𑔜, 𑔝, 𑔞, 𑔟, 𑔠, 𑔡, 𑔢, 𑔣, 𑔤, 𑔥, 𑔦, 𑔧, 𑔨, 𑔩, 𑔪, 𑔫, 𑔬, 𑔭, 𑔮, 𑔯, 𑔰, 𑔱, 𑔲, 𑔳, 𑔴, 𑔵, 𑔶, 𑔷, 𑔸, 𑔹, 𑔺, 𑔻, 𑔼, 𑔽, 𑔾, 𑔿, 𑕀, 𑕁, 𑕂, 𑕃, 𑕄, 𑕅, 𑕆, 𑕇, 𑕈, 𑕉, 𑕊, 𑕋, 𑕌, 𑕍, 𑕎, 𑕏, 𑕐, 𑕑, 𑕒, 𑕓, 𑕔, 𑕕, 𑕖, 𑕗, 𑕘, 𑕙, 𑕚, 𑕛, 𑕜, 𑕝, 𑕞, 𑕟, 𑕠, 𑕡, 𑕢, 𑕣, 𑕤, 𑕥, 𑕦, 𑕧, 𑕨, 𑕩, 𑕪, 𑕫, 𑕬, 𑕭, 𑕮, 𑕯, 𑕰, 𑕱, 𑕲, 𑕳, 𑕴, 𑕵, 𑕶, 𑕷, 𑕸, 𑕹, 𑕺, 𑕻, 𑕼, 𑕽, 𑕾, 𑕿, 𑖀, 𑖁, 𑖂, 𑖃, 𑖄, 𑖅, 𑖆, 𑖇, 𑖈, 𑖉, 𑖊, 𑖋, 𑖌, 𑖍, 𑖎, 𑖏, 𑖐, 𑖑, 𑖒, 𑖓, 𑖔, 𑖕, 𑖖, 𑖗, 𑖘, 𑖙, 𑖚, 𑖛, 𑖜, 𑖝, 𑖞, 𑖟, 𑖠, 𑖡, 𑖢, 𑖣, 𑖤, 𑖥, 𑖦, 𑖧, 𑖨, 𑖩, 𑖪, 𑖫, 𑖬, 𑖭, 𑖮, 𑖯, 𑖰, 𑖱, 𑖲, 𑖳, 𑖴, 𑖵, 𑖶, 𑖷, 𑖸, 𑖹, 𑖺, 𑖻, 𑖼, 𑖽, 𑖾, 𑖿, 𑗀, 𑗁, 𑗂, 𑗃, 𑗄, 𑗅, 𑗆, 𑗇, 𑗈, 𑗉, 𑗊, 𑗋, 𑗌, 𑗍, 𑗎, 𑗏, 𑗐, 𑗑, 𑗒, 𑗓, 𑗔, 𑗕, 𑗖, 𑗗, 𑗘, 𑗙, 𑗚, 𑗛, 𑗜, 𑗝, 𑗞, 𑗟, 𑗠, 𑗡, 𑗢, 𑗣, 𑗤, 𑗥, 𑗦, 𑗧, 𑗨, 𑗩, 𑗪, 𑗫, 𑗬, 𑗭, 𑗮, 𑗯, 𑗰, 𑗱, 𑗲, 𑗳, 𑗴, 𑗵, 𑗶, 𑗷, 𑗸, 𑗹, 𑗺, 𑗻, 𑗼, 𑗽, 𑗾, 𑗿, 𑘀, 𑘁, 𑘂, 𑘃, 𑘄, 𑘅, 𑘆, 𑘇, 𑘈, 𑘉, 𑘊, 𑘋, 𑘌, 𑘍, 𑘎, 𑘏, 𑘐, 𑘑, 𑘒, 𑘓, 𑘔, 𑘕, 𑘖, 𑘗, 𑘘, 𑘙, 𑘚, 𑘛, 𑘜, 𑘝, 𑘞, 𑘟, 𑘠, 𑘡, 𑘢, 𑘣, 𑘤, 𑘥, 𑘦, 𑘧, 𑘨, 𑘩, 𑘪, 𑘫, 𑘬, 𑘭, 𑘮, 𑘯, 𑘰, 𑘱, 𑘲, 𑘳, 𑘴, 𑘵, 𑘶, 𑘷, 𑘸, 𑘹, 𑘺, 𑘻, 𑘼, 𑘽, 𑘾, 𑘿, 𑙀, 𑙁, 𑙂, 𑙃, 𑙄, 𑙅, 𑙆, 𑙇, 𑙈, 𑙉, 𑙊, 𑙋, 𑙌, 𑙍, 𑙎, 𑙏, 𑙐, 𑙑, 𑙒, 𑙓, 𑙔, 𑙕, 𑙖, 𑙗, 𑙘, 𑙙, 𑙚, 𑙛, 𑙜, 𑙝, 𑙞, 𑙟, 𑙠, 𑙡, 𑙢, 𑙣, 𑙤, 𑙥, 𑙦, 𑙧, 𑙨, 𑙩, 𑙪, 𑙫, 𑙬, 𑙭, 𑙮, 𑙯, 𑙰, 𑙱, 𑙲, 𑙳, 𑙴, 𑙵, 𑙶, 𑙷, 𑙸, 𑙹, 𑙺, 𑙻, 𑙼, 𑙽, 𑙾, 𑙿, 𑚀, 𑚁, 𑚂, 𑚃, 𑚄, 𑚅, 𑚆, 𑚇, 𑚈, 𑚉, 𑚊, 𑚋, 𑚌, 𑚍, 𑚎, 𑚏, 𑚐, 𑚑, 𑚒, 𑚓, 𑚔, 𑚕, 𑚖, 𑚗, 𑚘, 𑚙, 𑚚, 𑚛, 𑚜, 𑚝, 𑚞, 𑚟, 𑚠, 𑚡, 𑚢, 𑚣, 𑚤, 𑚥, 𑚦, 𑚧, 𑚨, 𑚩, 𑚪, 𑚫, 𑚬, 𑚭, 𑚮, 𑚯, 𑚰, 𑚱, 𑚲, 𑚳, 𑚴, 𑚵, 𑚶, 𑚷, 𑚸, 𑚹, 𑚺, 𑚻, 𑚼, 𑚽, 𑚾, 𑚿, 𑛀, 𑛁, 𑛂, 𑛃, 𑛄, 𑛅, 𑛆, 𑛇, 𑛈, 𑛉, 𑛊, 𑛋, 𑛌, 𑛍, 𑛎, 𑛏, 𑛐, 𑛑, 𑛒, 𑛓, 𑛔, 𑛕, 𑛖, 𑛗, 𑛘, 𑛙, 𑛚, 𑛛, 𑛜, 𑛝, 𑛞, 𑛟, 𑛠, 𑛡, 𑛢, 𑛣, 𑛤, 𑛥, 𑛦, 𑛧, 𑛨, 𑛩, 𑛪, 𑛫, 𑛬, 𑛭, 𑛮, 𑛯, 𑛰, 𑛱, 𑛲, 𑛳, 𑛴, 𑛵, 𑛶, 𑛷, 𑛸, 𑛹, 𑛺, 𑛻, 𑛼, 𑛽, 𑛾, 𑛿, 𑜀, 𑜁, 𑜂, 𑜃, 𑜄, 𑜅, 𑜆, 𑜇, 𑜈, 𑜉, 𑜊, 𑜋, 𑜌, 𑜍, 𑜎, 𑜏, 𑜐, 𑜑, 𑜒, 𑜓, 𑜔, 𑜕, 𑜖, 𑜗, 𑜘, 𑜙, 𑜚, 𑜛, 𑜜, 𑜝, 𑜞, 𑜟, 𑜠, 𑜡, 𑜢, 𑜣, 𑜤, 𑜥, 𑜦, 𑜧, 𑜨, 𑜩, 𑜪, 𑜫, 𑜬, 𑜭, 𑜮, 𑜯, 𑜰, 𑜱, 𑜲, 𑜳, 𑜴, 𑜵, 𑜶, 𑜷, 𑜸, 𑜹, 𑜺, 𑜻, 𑜼, 𑜽, 𑜾, 𑜿, 𑝀, 𑝁, 𑝂, 𑝃, 𑝄, 𑝅, 𑝆, 𑝇, 𑝈, 𑝉, 𑝊, 𑝋, 𑝌, 𑝍, 𑝎, 𑝏, 𑝐, 𑝑, 𑝒, 𑝓, 𑝔, 𑝕, 𑝖, 𑝗, 𑝘, 𑝙, 𑝚, 𑝛, 𑝜, 𑝝, 𑝞, 𑝟, 𑝠, 𑝡, 𑝢, 𑝣, 𑝤, 𑝥, 𑝦, 𑝧, 𑝨, 𑝩, 𑝪, 𑝫, 𑝬, 𑝭, 𑝮, 𑝯, 𑝰, 𑝱, 𑝲, 𑝳, 𑝴, 𑝵, 𑝶, 𑝷, 𑝸, 𑝹, 𑝺, 𑝻, 𑝼, 𑝽, 𑝾, 𑝿, 𑞀, 𑞁, 𑞂, 𑞃, 𑞄, 𑞅, 𑞆, 𑞇, 𑞈, 𑞉, 𑞊, 𑞋, 𑞌, 𑞍, 𑞎, 𑞏, 𑞐, 𑞑, 𑞒, 𑞓, 𑞔, 𑞕, 𑞖, 𑞗, 𑞘, 𑞙, 𑞚, 𑞛, 𑞜, 𑞝, 𑞞, 𑞟, 𑞠, 𑞡, 𑞢, 𑞣, 𑞤, 𑞥, 𑞦, 𑞧, 𑞨, 𑞩, 𑞪, 𑞫, 𑞬, 𑞭, 𑞮, 𑞯, 𑞰, 𑞱, 𑞲, 𑞳, 𑞴, 𑞵, 𑞶, 𑞷, 𑞸, 𑞹, 𑞺, 𑞻, 𑞼, 𑞽, 𑞾, 𑞿, 𑟀, 𑟁, 𑟂, 𑟃, 𑟄, 𑟅, 𑟆, 𑟇, 𑟈, 𑟉, 𑟊, 𑟋, 𑟌, 𑟍, 𑟎, 𑟏, 𑟐, 𑟑, 𑟒, 𑟓, 𑟔, 𑟕, 𑟖, 𑟗, 𑟘, 𑟙, 𑟚, 𑟛, 𑟜, 𑟝, 𑟞, 𑟟, 𑟠, 𑟡, 𑟢, 𑟣, 𑟤, 𑟥, 𑟦, 𑟧, 𑟨, 𑟩, 𑟪, 𑟫, 𑟬, 𑟭, 𑟮, 𑟯, 𑟰, 𑟱, 𑟲, 𑟳, 𑟴, 𑟵, 𑟶, 𑟷, 𑟸, 𑟹, 𑟺, 𑟻,

signified such vessels and weights, were also used as tax names. In ancient India (Arthaśāstra), to facilitate revenue collection, vessels and weights of different denominations of the same volumetric and weight-based units (e.g., ‘droṇa’ and “dhāraṇa”), were used for revenue (āyamāna) and trading (vyāvahārikā), where the revenue-measures were greater than the trade-measures. Thus certain tax-collectors and revenue centres were called ‘droṇamāpaka’ (‘who measures droṇa’) and ‘droṇamukha’ respectively. But ‘droṇa’ originally meant a “wooden vessel”, whereas ‘dhāraṇa’ meant “bearing/carrying”. Another weight, called “bhāra”, also meant “a yoke for carrying burdens”. Later, in Gūrjara-Pratīhāra dynasty, a tax called ‘skandhaka’ was taken at a certain rate per shoulder-load (‘skandha’ means shoulder). Now, considering the graphemic relationship of the jar-like phrase-final sign  with the jar-like metrological signs (, , , , , , , ) and the unmistakable resemblance of  based signs with load-bearers, this paper argues that these signs were related to certain volumetric and weight-based standards of IVC, and they metonymically signified certain broad tax categories. It further argues that at least some of the phytomorphic signs signified certain taxes on food-grains and/or fibre-crops, or taxes paid by such commodities. Considering the iconicity of certain pre-phrase-final signs (e.g., ) , and their close relationship with the phrase-final signs, this study claims that such signs signified various modes of tax-payment.

NEOLITHIC CULTURE AS REVEALED FROM MODUR EXCAVATIONS DHARMAPURI DISTRICT, TAMIL NADU

K. Sridaran

Former Deputy Superintending Archaeologist
Tamil Nadu State Department of Archaeology



Archaeology studies the story of Man's past through his material remains. Archaeology as a discipline has developed into several dimensions and can be broadly divided into Pre-Historic Archaeology and Historical Archaeology. The story of Mankind starts from Palaeolithic and passes through- Mesolithic, (Microlithic culture) Neolithic and finally to Historical period.

NEOLITHIC CULTURE

In the cultural history of Mankind, the Neolithic Age marks the concluding phase of the stone age culture. This age is characterised by the introduction of more developed typo-technological features. Man transformed from "food gathering stage to food producing stage". The significance of this age is the evolution of grinding and polishing of stone after they were fashioned by the usual flaking techniques. As a result the worked tool was usually smooth having rounded edges. The salient feature of this age are settled life, domestication of animals, manufacture of pottery and ground stone tools. So this period is called as "Neolithic Revolution".

TAMIL NADU

In Tamil Nadu - Vellore, Salem, Krishnagiri and Dharmapuri districts yielded large number of Neolithic tools. The hills such as Shevroy, Vattamalai, Kalrayan and Javadi Hills are favourable habitats for the growing of Neolithic Culture.

HABITATION SITES

Some of the important Neolithic habitation sites in Tamil Nadu like Paiyampalli, Chandrapuram, Gollapalli, Togarapalli, Panidimaduvu, Dailamalai Mullikkadu, Kappalavadi and Bargur in this region show evidence of Neolithic Culture.

ARCHAEOLOGICAL EXCAVATIONS

The excavations were conducted in places like Paiyampalli, Mayiladumparai, Mallappadi, Guttur, Mullikkadu, Togarapalli, Odugattur and Modur in Dharmapuri District.

MODUR

Modur is located about 15 km North-West of Dharmapuri town. The name of the village is derived from the word Mūdūr, which means ancient or old in Tamil. The village Modur is more or less a raised and undulating landscape with a number of mounds in close proximity. Three district habitation mounds are noticed in between the three hillocks. The first two mounds yielded black and red ware and brown ware indicating these mounds belong to the Iron Age. Another mound locally called as Kottaimeedu and also as Boothimeedu (ash mound)

EXPLORATION

These areas were explored in 1989 by a team of Archaeologists consisting of Dr. K.Rajan, S. Selvaraj and T. Subramanian. Several antiquities of Neolithic and Megalithic period were collected by them. Stone implements like Neolithic stones, Hammer stones, Rubbing Stones, Polishing stone also collected from this site. This village is also surround by important Archaeological sites like Panaiyakulam, Palavadi, Kolakattur, Kadagattur and Bikanahalli.

EXCAVATIONS at MODUR

Archaeological excavations conducted at Modur in the year 2004 - 2005 by the State Department of Archaeology, Govt. of Tamil Nadu. 15 trenches were

laid in Modur village. The excavations yielded Neolithic pottery like grey ware, burnished red ware, brown ware and tan ware.

The Modur excavation yielded seventeen (17) Neolithic Celts. Stone objects like sling stone, spheroid Rubbers, Flat grinding oval discoid, grooved hammers, stone dabber, polishing stone are also obtained. Significant finds like Mother Goddess (2), animal figure ram, terracotta Mould and other antiquities are obtained in the excavation.

Three cultural phases were identified in the excavation Period - I (3000-100 B.C.E.,) is characterised by Neolithic Celts and also obtained in the layer - lower most level.

Period II is characterised by Black and Red ware and other pottery and iron objects.

Period III is characterised by Terracotta objects and figurines.

The Archaeological excavation at Modur gave more invaluable antiquities of Neolithic age and further.

Further excavations in this region will throw more light on Neolithic Culture of Tamil Nadu.

REMINISCENCES ABOUT SRI. IRAVATHAM MAHADEVAN: SOME FUTURE DIRECTIONS IN INDUS CIVILIZATION RESEARCH AND THEIR LINKS WITH IRON AGE TAMIL NADU

Dr. N. Ganesan

Independent Researcher, NASA
Houston, Texas, USA



Sri. Iravatham Mahadevan started his professional career as a sub-collector of Pollachi taluk in Coimbatore. I will share some his rare photographs as a young I.A.S officer during his visits to our village for explaining Parambikulam – Aliyar Irrigation project, Vinoba Bhave's Bhuudaan movement and visits to Sulakkal Mariamman temple car festival. These pictures have not been published before. Harvard Oriental Series (HOS) is a century+ old publication series in Indology discipline from the ivy league Harvard University. The first book about Tamil in the prestigious HOS is Iravatham's Early Tamil Epigraphy, and will tell some memories of how this book project got going. Also, about some of IM's views about Sembiyan Kandiyur cert. I will discuss some connections of the sign of the megalithic pottery sherds found in Saanur, Mangudi, Muciri, and now from Keezhadi also. Iravatham Mahadevan called the sign as Muruku sign, while Indologist Parpola calls the sign as crocodile sign. I will show some of the continuity of the so called Muruku sign from the Rock Art of Central India at Satkunda and Bhimbetka and also, the sign in Pre-Mauryan Punch Marked coins, such as the one found in Keezhadi excavations.

TAMIL-BRAHMI INSCRIPTIONS AND SETTLEMENT PATTERNS OF EARLY HISTORIC TAMILZHAGAM

Dr. V. Selvakumar

Associate Professor
Department of Maritime History and Marine
Archaeology
Tamil University
Thanjavur



Tamil-Brahmi inscriptions are found in various sites across Tamil Nadu. The sites of their occurrence can be categorized into A) Caves and Rock shelters B) Village Settlements C) Urban Settlements. The sites yielding inscriptions cannot be seen in isolation and they need to be viewed as part of the settlement patterns on the landscapes. The inscriptions are often associated with sites that are connected with trade routes and major settlements. In the context of caves and shelters, they could be seen as centres of ideologies. Most often names of merchants occur in the cave shelters suggesting that the merchants visited these sites and perhaps offered worship. In the context of inscriptions on the ceramic vessels and objects and coins they are labels of identities of the individuals. A large concentration of the rockshelters with inscriptions is found around Madurai and along the trade routes. The coastal sites and industrial sites have higher number of inscriptions on ceramic vessels. It appears that the quantity of inscriptions of pottery is in proportionate to the importance of the settlement and their commercial and political and religious affiliations. This paper discusses the settlements contexts and patterns of the sites with Tamil Brahmi inscriptions.

சில தமிழ் – பிராமிக் கல்வெட்டுகள் மறுபார்வை

Dr. V. Vedachalam

Former Senior Epigraphist
Tamil Nadu State Department of Archaeology



தாதப்பட்டி, புலிமான்கோம்பை, அய்யனார்துளம் முதலிய இடங்களில் கண்டறியப்பட்ட தமிழ் – பிராமிக் கல்வெட்டுகள் குறித்து ஐராவதம் மகாதேவன், க.இராஜன் போன்ற ஆய்வாளர்கள் ஆய்வு செய்து தமது கருத்துக்களை வெளியிட்டுள்ளனர். இவற்றிற்கு வேறுமுறையில் பொருள்கூற வாய்ப்புள்ளது.

தாதப்பட்டியில் கிடைத்த சங்ககாலத் தமிழ் – பிராமி நடுகல்லில் வரும் 'அடியோன்' என்ற சொல்லிற்கு பணியாள், சேவகன் என்று கூறுவதைவிட கல்வெட்டுக் கிடைத்த பகுதியில் ஆட்சிபுரிந்த சீறூர் மன்னனாகக் கருதவாய்ப்புள்ளது. பாண்டியர், பல்லவர் போன்ற பேரரசர்களுக்குக் கட்டுப்பட்டு அவர்களுக்குத் துணை வேண்டும்போது முன்வந்து பணிசெய்யும் சிற்றரசர் மரபினரைக் குறிக்கும் சொல்லாகவே இதனைக் கருத வேண்டியுள்ளது. மகேந்திரவர்ம பல்லவன் காலத்து வல்லம் கல்வெட்டு 'மயேந்திரபோத்தரைசரு அடியான் வயந்தபிரியரைசரு மகன் கந்தசேனன்' என்று கூறுவது இதனை உறுதிப்படுத்துகிறது. எனவே தாதப்பட்டிப் பகுதியில் பாண்டியருக்குக் கட்டுப்பட்டு ஆண்ட சிற்றரச மரபினனாக, சிறூர் மன்னனாகவே தாதப்பட்டிக் கல்வெட்டில் வரும் 'அடியோன்' என்ற சொல்லைக் கொள்ள வாய்ப்புள்ளது. மேலும் இக்கல்வெட்டில் வரும் 'பாகல்' என்ற சொல்லை இடப்பெயராகவே கொள்ளவேண்டும்.

புலிமான்கோம்பை ஆகோள் கல்வெட்டில் வரும் 'பேடு' என்ற சொல்லை படு, பட்ட என்ற வினைச்சொல்லாக முந்து மலையாளச் சொல்லாக ஐராவதம் மகாதேவன் கருதுவது பொருத்தமுடையதாகத் தோன்றவில்லை. இச்சொல்லை

இடப்பெயராகவே கொள்ளவேண்டும். மேலும் அக்கல்வெட்டில் வரும் கூடலூர் என்ற ஊரை புலிமான் கோம்பையிலிருந்து மிகுந்த தொலைவில் சேரநாட்டு எல்லையில் உள்ள கம்பம் கூடலூராகக் கருத வாய்ப்பில்லை. இவ்வூர் புலிமான் கோம்பைக்கு அருகில் வைகையாறும் வராகநதியும் இணையும் இடத்திலுள்ள இன்று குள்ளபுரம் என்று அழைக்கப்படும் ஊராகவே இருக்கவேண்டும். இவ்வூரிலுள்ள கல்வெட்டுகளில் இவ்வூர் கூடலூர் என்றே குறிப்பிடப்படுகிறது.

அய்யனார்குளம் (மன்னார்கோயில்) கல்வெட்டில் வரும் கடிகை என்ற சொல்லை வடமொழிக் கல்லூரியைக் குறிக்கும் கடிகாவோடு ஒப்பிட்டுக் கற்றவர்கள் கூடி ஆய்வுசெய்யும் இடம் என்று ஐராவதம் மகாதேவன் கூறுவது மீளாய்வுக்குரியது. கல்வெட்டில் வரும் கடிகை என்ற சொல்லைத் தமிழ்ச்சொல்லாகக் கொண்டு அதனை இடப்பெயராகவே கொள்ளவேண்டும். காவல் மிகுந்த நகரம், மணமிக்க இடம் என்ற பொருள்தரும் இச்சொல் இப்பகுதியில் பாயும் கடிஞை என்ற ஆற்றின் அடிப்படையாக வந்திருக்க வேண்டும். கடிஞையாறு ஒன்று இடைக்காலக் கல்வெட்டுகளில் குறிப்பிடும் இவ்வாற்றின் கரையில் அமைந்த ஊராக இது இருந்திருக்க வேண்டும். அவ்ஆற்றின் அடிப்படையில் இவ்வூர் பெயரிடப் பெற்றிருக்கவேண்டும். இவ்வூரிலிருந்து ஆட்சிபுரிந்த சிற்றூர் மன்னனே 'கடிகைக்கோ' என்று அய்யனார்குளம் கல்வெட்டில் குறிப்பிடப்பட்டிருக்க வேண்டும். அய்யனார்குளம் மற்றொரு கல்வெட்டில் வரும் 'குணாவின் ளங்கோ' என்ற சொல்லுக்குக் கிழக்குத் திசைக்குக் காவலாக இருந்து ஆட்சிபுரியும் பாண்டிய மன்னனின் இளவரசன் என்று பொருள் கொள்ள வாய்ப்புள்ளது.

SEMBIAN KANDIYUR CELT - A RELOOK

Dr. N. Marxiagandhi

Former Deputy Superintending Archaeologist
Tamil Nadu State Department of Archaeology



As all know that Sembian Kandiur neolithic Celt with some Indus like symbols have been discovered by TNSDA in 2006. In continuation of that most of the scholars on Indus research commented about the signs, axe and its period.

In view of this it is realised that a relook has been needed for further understanding and progress.

This paper is a humble attempt in that direction.

மகாதேவன் தமிழ் – பிராமி கல்வெட்டு வாசிப்புகளில் சில மாற்றங்கள்

Dr. R. Poongundran

Former Assistant Director
Tamil Nadu State Department of Archaeology



தமிழகத்தில் கிடைக்கும் 89 தமிழ்ப் பிராமிக் கல்வெட்டுகளைக் கொண்டு மிகப் பெரிய ஆய்வு நூலை வெளியிட்ட பெருமை ஐராவதம் மகாதேவன் அவர்களையே சேரும். அக்கல்வெட்டுகளில் நாற்பதாண்டுக் கால அவருடைய ஊடாட்டம் வழியாகப் பல அரிய வாசிப்புகளையும், மறுவாசிப்புகளையும் உருவாக்கும் பெருமை பெற்றவராக அவர் விளங்குகிறார். மேலும் பல புதிய ஆய்வு முடிவுகளை அவர் அளித்துள்ளார் என்பது போற்றத்தகுந்தது. ஏறக்குறைய 2500 சங்கச் செய்யுள்கள் எமக்குக் கிடைத்த போதிலும் செந்தமிழ் நடையினைப் பெற்றிருந்த போதிலும் அவை பற்றி இப்படியொரு அரிய நூல் இல்லை என்பது குறிப்பிடத்தக்கது. அமெரிக்க ஹார்வர்ட் பல்கலைக்கழக வெளியீடாக இது வந்திருப்பதால் தமிழ் பிராமிக் கல்வெட்டுகள் உலகம் போற்றும் பெட்டகமாக உயர்ந்து நிற்கின்றது. ஈழத்தில் 1000 க்கும் மேற்பட்ட கல்வெட்டுகள் கிடைக்கின்றன. அவை பற்றி பர்ணவிதானா அரிய நூல் ஒன்றை வெளியிட்டுள்ளார். அந்நூலைப் பின்பற்றி இந்நூல் அமைந்திருந்த போதிலும் பலவகைகளில் வேறு பட்டதாக இந்நூல் அமைந்திருப்பது குறிப்பிடத்தக்கது. இந்நூல் பன்முகப்பட்டதாக இருந்த போதிலும் சில செய்திகள் விடுபட்டுப் போன நிலையில் விடுபட்டதைப் பற்றி இங்கு ஆய்வு செய்யப்படுகிறது.

மகாதேவன் அவர்கள் வெளியிட்டுள்ள வாசகங்களில் சில வாசிப்பு மாற்றங்கள் செய்யவேண்டியுள்ளது மாங்குளம் கல்வெட்டில் வெள் அறை என்பதை வேள் அறை என்றும் வாசிக்கலாம். வெண்காசிபன் என்பதை வேண்காசிபன் என்னும் வாசிக்க முடியும். விக்கிரமங்கலம் கல்வெட்டில் வென் அதான என்ற வாசிப்பை

வென் அதன் என்றும் வாசிக்கலாம். அதான என்று வேறுசில கல்வெட்டுகளிலும் வாசிக்கப்பட்டுள்ளது. அந்தச் சொற்களை அதன் என்றே கொள்ளமுடியும்

சில சொற்களின் பொருள் மாற்றம்

மன்னார் கோயில் கல்வெட்டில் பயின்றும் கடிகை என்ற சொல்லுக்கு கற்றறிந்த சான்றோர் என்று பொருள் கொள்கின்றார். ஆனால் கடிகையில் வேதம் கற்பதோடு ஆயுத பயிற்சியும் பெற்றனர் காஞ்சி கடிகையொன்றில் படிக்க வந்த மயூரசர்மன் ஆயுத பயிற்சியும் பெற்றான். கே.வி.சுப்ரமணிய அய்யர் அவர்கள் இடைக்கல்வெட்டில் பயின்றுவரும் கடிகைதாவளம் என்பது வடமொழியில் கடிகாஸ்தான என்று அழைக்கப்பெறுகின்றது என்று கூறி இச்சொல் படைபாதுக்கப்படுதலைய தாவளம் என்று பொருள் கொள்வார். இந்தப் பொருளே சிறக்கும்.

IVC'S VENUS OCTANNIAL FESTIVAL TABLET

Sukumar Rajagopal

Independent Researcher



In the Indus Valley Civilization (IVC), the tablet H-182 (Parpola 1994 Fig 13.3 provided as Fig 1 below), denotes the celebration or festival that was held once every 8 years, when Venus returns to the same heliacal rising point in the sky. And that the sign sequence is a Symbologram (my coinage to mean a message coded as symbols) which represents a single entry from an ancient astrological almanac *pañchāṅgam*/*pañjikā*. This tablet could be one entry from a larger series of seals and tablets that may have constituted a Harappan celestial omen list.

We also point to what may have been the actual venue of this Octennial Festival, which solves another long standing puzzle in the IVC research community. To show that this hypothesis has predictive power, in the concluding section of this paper, we demonstrate how the first ever IVC seal discovered, can be deciphered using the same methodology.

AUTHOR, ORIGIN AND CHRONOLOGY OF TAMIL SCRIPT- ITS STAGES OF DEVELOPMENT – RECENT FINDINGS

Dr. S.Rajavelu

Adjunct Faculty Department of History
Alagappa University
Karaikkudi



A student of South Indian Palaeography and Epigraphy could not simply ignore the tremendous contribution of Iravatham Mahadevan's works in the field of Tamil script. His magnum opus books on Early Tamil Epigraphy, its revised edition is an eye-opener for the researchers in the respective fields. When he researched the topic of Early Tamil Epigraphy, not much scientific data and dates have arrived for the fixation of the date, origin and the authorship of the Tamil or Tamil-Brāhmī script. He fixes the date for Tamil script to the 2nd-century BCE and the script was according to him originated from Mauryan Brāhmī. He strongly advocated that the Tamil or Tamil- Brāhmī script was borrowed by the Tamils through Jaina monks of North India around the 2nd Century BCE. Since the successful decipherment of the cavern inscriptions by K.V.Subramaniya Ayer, almost all the scholars in the field of South Indian Palaeography and Epigraphy had the opinion that the cavern inscriptions were used by the Tamil people for the language Tamil around the 3rd or 2nd Century BCE and the script was introduced in Tamil country either by Jains or Buddhist or Ājivika monks.

The theory was further strengthened by Iravatham Mahadevan and fixed its date to the 2nd Century BCE and he strongly believed that the Tamil script was of Jaina origin. However, the scholars like K.V. Ramesh, P.R. Srinivasan, M.D. Sampath, Natana.Kasinathan and the author of this article held a view that the script was created by the Tamil people around the 5th Century BCE, prior to the

Asokan period to suit the Tamil language on the basis of palaeography, regional variation, phonetic differences and orthographic features.

The above view is further supported by the recent scientific radiometric dates arrived from the excavations at Porunthal, Koḍumaṇal and Keelaḍi by K. Rajan and the Tamil Nadu State Department of Archaeology. Further, the scientific data pushes the chronology of Tamiḻ script to the 6th or 7th century BCE. These scientific dates from the excavations shed more light on the chronology of the script which gives the clue to examine the authorship of the Cavern inscriptions, whether the beds in the natural cavern along with the Tamiḻ inscriptions associated with the Jaina or Buddhist or Ājivika monks or the native Tamil scholars. This paper is in the light of the recent archaeological findings and palaeographical and orthographical grounds, analysing the chronology, origin and authorship of the Tamiḻ inscriptions. Besides the stages of development is also discussed.

சங்ககாலத் தமிழ் – பிராமி மோதிரங்கள், முத்திரைகள், காசுகள்



Arumuga Seetharaman

Independent Researcher

இன்றைய சூழலில் சங்ககால நாணயவியல் வளர்ந்துவரும் ஒரு துறையாக உள்ளது. நாணயவியல் ஆய்வுகள் பலவும் தொடர்ந்து வெளிவந்த வண்ணமுள்ளன. இவ்வாய்வுகள் எதிர்கால நாணயவியல் வளர்ச்சிக்கு வளஞ்சேர்ப்பனவாய் அமைதல் வேண்டும். நாணயவியல் துறையில் மோதிரங்கள், முத்திரைகள் மற்றும் பதக்கங்கள் இடம் பெற்றுள்ளன. இந்தக் கட்டுரையில் தமிழ் பிராமி எழுத்துப் பொறிப்புள்ள காசுகள், மோதிரங்கள், முத்திரைகளுக்கு மட்டுமே முக்கியத்துவம் கொடுத்து எழுதப்பட்டுள்ளது. சங்க காலத்தில் எழுத்தறிவு சமுதாய மட்டத்தில் பல தரத்திலுள்ளோர் மத்தியிலும் பரவியிருந்தது என்பதற்கு எழுத்துப் பொறிப்புள்ள காசுகள், முத்திரைகள் மற்றும் மோதிரங்கள் சிறந்த சான்றுகளாக விளங்குகின்றன.

மோதிரங்கள்

ஊபா.ஆன், அரிஅமான், தியன் ஓதலன், மிதிரான், தியான், அந்திகான், பேர் அவதான், வெள்ளசாம்பான், தித்தன்.

முத்திரைகள்

குறவன், பாராதன், வில்அதின, நிலகன்,

காசுகள்

பெருவழுதி, கெல்இரும்புறைய் கெல்இப்புறைய், மாக்கோதை, குட்டுவன்கோதை, அதின்னன் எதிரான் சேந்தன்.

REMINISCENCES OF PADMASRI IRAVATHAM MAHADEVAN



T. S. Subramanian

Independent Researcher

The late Iravatham Mahadevan excelled in five fields that he took to: administration, Tamil-Brahmi script, the Indus script, numismatics and journalism. I first met him after he had resigned from the Indian Administrative Service (IAS) and he had become the Executive Director, Indian Express, Chennai, in the early 1980s. I was a reporter in Indian Express then and I have seen how several decisions he took then endeared him to the workers. I continued to be a reporter in Indian Express when Mahadevan later became Editor, Dinamani and he introduced far-reaching reforms in the use of de-Sanskritised Tamil in the newspaper. He devoted 50 years of his life to visiting, documenting and deciphering Tamil Brahmi inscriptions which were found engraved on the brows of natural caverns on hills in Tamil Nadu, and on pottery, coins and rings. His work Corpus of Tamil Brahmi Inscriptions, 1966, led to a wave of exploration to locate these Tamil Brahmi sites in the State. His “Early Tamil Epigraphy: From the Earliest Times to the Sixth Century A.D.”, 2003 which, to quote R. Champakalakshmi, “is the result of more than forty years of dedication and penance, is truly Mahadevan’s magnum opus.” In documenting these Tamil Brahmi inscriptions, he achieved what massive organisations such as the ASI, the Central universities and State-funded universities with their enormous resources could not do. He established that the language of these Tamil-Brahmi inscriptions is Old Tamil and that these inscriptions are the oldest writings in any Dravidian language. They are also the oldest Jaina inscriptions in India.

His interpretation of these inscriptions revealed the depth of his scholarship in Tamil literature and linguistics. When doubts were raised on the “authenticity” of the Jambai Tamil Brahmi inscription on “Satiyaputo Atiyaman Neduman Anji”, he used his administrative skill and imaginative methods to prove that the inscription was not a fake.

On the Harappan front, Mahadevan’s another monumental work, “The Indus Script: Text, Concordance and Tables”, 1977, continues to be the basis for scholars to do advanced research in the Harappan script. He argued that the language of the Indus script “is an early form of Dravidian”. He believed that he had “discovered important clues for interpreting many of the frequent [Indus] signs and sequences, proving conclusively the Dravidian character of the language...”